

May 1, 2026



Mr. Michael W. Smith, P.E.
Environmental Engineer Senior
IDNR - Land Quality Bureau
6200 Park Avenue, Suite 200
Des Moines, Iowa 50321

**RE: Response to April 9, 2026, IDNR Comment Letter (Doc #116812)
Rural Iowa Sanitary Landfill
IDNR Permit No. 42-SDP-01-72P**

Mr. Smith:

This letter is provided in response to the arsenic results detected at the monitoring point designated ACM Tile 1. The IDNR comment letter dated April 9, 2026, (Doc #116812) requires response prior to May 4, 2026.

Over the course of time, the ditch below the pipe outlet of ACM Tile 1 became filled with sediment. In 2025, the open end of pipe was approximately one-third submerged in ponded water within the sediment choked ditch. The water discharged from the pipe end did not flow freely. The ponded water in and around the pipe end demonstrated visual evidence of iron bacteria, or some similar biological impact on the stagnant water. The water samples collected in 2025 demonstrated a reddish hue and elevated turbidity.

On April 12, 2026 and April 13, 2026, the landfill staff cleaned the ditch between PECS-1 and the outlet of ACM Tile 1 and regraded the ditch to restore proper drainage away from the discharge end of the pipe (ACM Tile 1).

On April 14, 2026, the ACM Tile 1 outlet was observed to exhibit about 18 inches of free fall between the end of pipe and the flowline of the regraded ditch. Additionally, the discharge of water from ACM Tile 1 was observed to appear very clear.

On April 14, 2026, an Appendix I sample was collected from ACM Tile 1 (attached). The arsenic results of the 2025 testing and the April 14, 2026, testing at ACM Tile 1 are presented below for direct comparison and for comparison to the Site-Specific GWPS for arsenic of 89.3 ug/L.

<u>Date</u>	<u>Turbidity (NTU)</u>	<u>Arsenic (ug/L)</u>	<u>Site-Specific GWPS</u>
4-15-2025	34.8	358 ug/L	89.3 ug/L
10-16-2025	109.5 (red)	545 ug/L	89.3 ug/L
4-13-2026	ditch cleaning and regrading completed		
4-14-2026	1.05	78.3 ug/L	89.3 ug/L

It is determined that the 2025 samples were impacted by the ponding and stagnation of water at the pipe end (at the sampling point ACM-Tile1). It appears the ditch cleaning and ditch grading work completed by the landfill staff remedied the problem and has improved the quality of the collected sample.

The arsenic concentration detected in the sample collected April 14, 2026 is within limits (less than 89.3 ug/L).

It is recommended that the semi-annual sampling frequency at ACM-Tile 1 continue. It is also recommended that ditch maintenance below ACM-Tile 1 be initiated routinely before the pipe end is submerged or the collected sample is otherwise compromised by site conditions not related to the landfill.

Please indicate whether the completed actions satisfy the Department regarding ACM-Tile 1 or whether additional response is required.

Sincerely,
HLW ENGINEERING GROUP



Todd Whipple, CPG
Project Manager

cc: Clint Reents, Manager



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JD1942

Project Description

6006

For:

Todd Whipple

HLW Engineering

204 West Broad St

Story City, IA 50248

Heather Murphy

Customer Relationship Specialist

Tuesday, April 28, 2026

Please find enclosed the analytical results for the samples you submitted to Microbac Laboratories. Review and compilation of your report was completed by Microbac Laboratories, Inc., Newton. If you have any questions, comments, or require further assistance regarding this report, please contact your service representative listed above.

I certify that all test results meet all of the requirements of the accrediting authority listed within this report. Analytical results are reported on a 'as received' basis unless specified otherwise. Analytical results for solids with units ending in (dry) are reported on a dry weight basis. A statement of uncertainty for each analysis is available upon request. This laboratory report shall not be reproduced, except in full, without the written approval of Microbac Laboratories. The reported results are related only to the samples analyzed as received.

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CERTIFICATE OF ANALYSIS

1JD1942

HLW Engineering

Todd Whipple
204 West Broad St
Story City, IA 50248

Project Name: 6006

Project / PO Number: N/A
Received: 04/17/2026
Reported: 04/28/2026

Sample Summary Report

<u>Sample Name</u>	<u>Laboratory ID</u>	<u>Client Matrix</u>	<u>Sample Type</u>	<u>Sample Begin</u>	<u>Sample Taken</u>	<u>Lab Received</u>
ACM Tile 1	1JD1942-01	Aqueous	GRAB		04/16/26 12:04	04/17/26 13:00



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JD1942

Analytical Testing Parameters

Client Sample ID:	ACM Tile 1	Collected By:	JGH
Sample Matrix:	Aqueous	Collection Date:	04/16/2026 12:04
Lab Sample ID:	1JD1942-01		

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 5030B/EPA 8260D							
Chloromethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Vinyl Chloride	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Bromomethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Chloroethane	3.4	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Trichlorofluoromethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,1-Dichloroethylene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Acetone	<10.0	10.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Methyl Iodide	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Carbon Disulfide	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Methylene Chloride	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Acrylonitrile	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,1-Dichloroethane	3.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Vinyl Acetate	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
cis-1,2-Dichloroethylene	1.4	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
2-Butanone (MEK)	<10.0	10.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Bromochloromethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Chloroform	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,1,1-Trichloroethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Carbon Tetrachloride	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Benzene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,2-Dichloroethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Trichloroethylene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,2-Dichloropropane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Dibromomethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Bromodichloromethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
cis-1,3-Dichloropropene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Toluene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
trans-1,3-Dichloropropene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,1,2-Trichloroethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Tetrachloroethylene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
2-Hexanone (MBK)	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Dibromochloromethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,2-Dibromoethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Chlorobenzene	6.2	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Ethylbenzene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Xylenes, total	<2.0	2.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Styrene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF

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CERTIFICATE OF ANALYSIS

1JD1942

Client Sample ID: ACM Tile 1	Collected By: JGH
Sample Matrix: Aqueous	Collection Date: 04/16/2026 12:04
Lab Sample ID: 1JD1942-01	

Determination of Volatile Organic Compounds	Result	RL	Units	Note	Prepared	Analyzed	Analyst
Bromoform	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,2,3-Trichloropropane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,4-Dichlorobenzene	2.1	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,2-Dichlorobenzene	<1.0	1.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L		04/20/26 0000	04/20/26 1357	RAF
Surrogate: Dibromofluoromethane	110	Limit: 57-128	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: Dibromofluoromethane	110	Limit: 75-136	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 49-135	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: 1,2-Dichloroethane-d4	108	Limit: 61-142	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: Toluene-d8	102	Limit: 82-116	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: Toluene-d8	102	Limit: 82-121	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: 4-Bromofluorobenzene	101	Limit: 77-114	% Rec		04/20/26 0000	04/20/26 1357	RAF
Surrogate: 4-Bromofluorobenzene	101	Limit: 80-116	% Rec		04/20/26 0000	04/20/26 1357	RAF

Metals Total by ICPMS	Result	RL	Units	Note	Prepared	Analyzed	Analyst
EPA 3005A/EPA 6020A							
Antimony	<0.00100	0.00100	mg/L		04/21/26 1501	04/22/26 2217	RVV
Arsenic	0.0783	0.00200	mg/L		04/21/26 1501	04/22/26 2217	RVV
Barium	0.588	0.00100	mg/L		04/21/26 1501	04/22/26 2217	RVV
Beryllium	<0.000500	0.000500	mg/L		04/21/26 1501	04/22/26 2217	RVV
Cadmium	<0.000200	0.000200	mg/L		04/21/26 1501	04/22/26 2217	RVV
Chromium	<0.00100	0.00100	mg/L		04/21/26 1501	04/22/26 2217	RVV
Cobalt	0.00404	0.000500	mg/L		04/21/26 1501	04/22/26 2217	RVV
Copper	<0.00500	0.00500	mg/L		04/21/26 1501	04/22/26 2217	RVV
Lead	<0.00100	0.00100	mg/L		04/21/26 1501	04/22/26 2217	RVV
Nickel	0.0178	0.00500	mg/L		04/21/26 1501	04/22/26 2217	RVV
Selenium	<0.00200	0.00200	mg/L		04/21/26 1501	04/22/26 2217	RVV
Silver	<0.00500	0.00500	mg/L		04/21/26 1501	04/22/26 2217	RVV
Thallium	<0.000500	0.000500	mg/L		04/21/26 1501	04/22/26 2217	RVV
Vanadium	<0.00200	0.00200	mg/L		04/21/26 1501	04/22/26 2217	RVV
Zinc	<0.00500	0.00500	mg/L		04/21/26 1501	04/22/26 2217	RVV



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CERTIFICATE OF ANALYSIS

1JD1942

Batch Log Summary

Method	Batch	Laboratory ID	Client / Source ID
EPA 8260D	1JD1230	1JD1230-BS1	
		1JD1230-BSD1	
		1JD1230-BLK1	
		1JD1942-01	ACM Tile 1
		1JD1230-MS1	1JD1939-01
		1JD1230-MSD1	1JD1939-01
Method	Batch	Laboratory ID	Client / Source ID
EPA 6020A	1JD1295	1JD1295-BLK1	
		1JD1295-BS1	
		1JD1942-01	ACM Tile 1
		1JD1295-MS1	1JD1942-01
		1JD1295-MSD1	1JD1942-01
		1JD1295-PS1	1JD1942-01

Batch Quality Control Summary: Microbac Laboratories, Inc., Newton

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										

Blank (1JD1230-BLK1)

Prepared: 04/20/26 00:00 Analyzed: 04/20/26 11:29

Chloromethane	<1.0	1.0	ug/L
Vinyl Chloride	<1.0	1.0	ug/L
Bromomethane	<1.0	1.0	ug/L
Chloroethane	<1.0	1.0	ug/L
Trichlorofluoromethane	<1.0	1.0	ug/L
1,1-Dichloroethylene	<1.0	1.0	ug/L
Acetone	<10.0	10.0	ug/L
Methyl Iodide	<1.0	1.0	ug/L
Carbon Disulfide	<1.0	1.0	ug/L
Methylene Chloride	<5.0	5.0	ug/L
Acrylonitrile	<5.0	5.0	ug/L
trans-1,2-Dichloroethylene	<1.0	1.0	ug/L
1,1-Dichloroethane	<1.0	1.0	ug/L
Vinyl Acetate	<5.0	5.0	ug/L
cis-1,2-Dichloroethylene	<1.0	1.0	ug/L
2-Butanone (MEK)	<10.0	10.0	ug/L
Bromochloromethane	<1.0	1.0	ug/L
Chloroform	<1.0	1.0	ug/L
1,1,1-Trichloroethane	<1.0	1.0	ug/L
Carbon Tetrachloride	<1.0	1.0	ug/L
Benzene	<1.0	1.0	ug/L
1,2-Dichloroethane	<1.0	1.0	ug/L
Trichloroethylene	<1.0	1.0	ug/L
1,2-Dichloropropane	<1.0	1.0	ug/L
Dibromomethane	<1.0	1.0	ug/L



Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JD1942

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										
Blank (1JD1230-BLK1)										
Prepared: 04/20/26 00:00 Analyzed: 04/20/26 11:29										
Bromodichloromethane	<1.0	1.0	ug/L							
cis-1,3-Dichloropropene	<1.0	1.0	ug/L							
4-Methyl-2-pentanone (MIBK)	<5.0	5.0	ug/L							
Toluene	<1.0	1.0	ug/L							
trans-1,3-Dichloropropene	<1.0	1.0	ug/L							
1,1,2-Trichloroethane	<1.0	1.0	ug/L							
Tetrachloroethylene	<1.0	1.0	ug/L							
2-Hexanone (MBK)	<5.0	5.0	ug/L							
Dibromochloromethane	<1.0	1.0	ug/L							
1,2-Dibromoethane	<1.0	1.0	ug/L							
Chlorobenzene	<1.0	1.0	ug/L							
1,1,1,2-Tetrachloroethane	<1.0	1.0	ug/L							
Ethylbenzene	<1.0	1.0	ug/L							
Xylenes, total	<2.0	2.0	ug/L							
Styrene	<1.0	1.0	ug/L							
Bromoform	<1.0	1.0	ug/L							
1,2,3-Trichloropropane	<1.0	1.0	ug/L							
trans-1,4-Dichloro-2-butene	<5.0	5.0	ug/L							
1,1,2,2-Tetrachloroethane	<1.0	1.0	ug/L							
1,4-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dichlorobenzene	<1.0	1.0	ug/L							
1,2-Dibromo-3-chloropropane	<5.0	5.0	ug/L							
<i>Surrogate: Dibromofluoromethane</i>	52.8		ug/L	50.2			105 57-128			
<i>Surrogate: Dibromofluoromethane</i>	52.8		ug/L	50.2			105 75-136			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.7		ug/L	50.4			105 49-135			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	52.7		ug/L	50.4			105 61-142			
<i>Surrogate: Toluene-d8</i>	51.2		ug/L	50.5			101 82-116			
<i>Surrogate: Toluene-d8</i>	51.2		ug/L	50.5			101 82-121			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.5		ug/L	50.2			101 77-114			
<i>Surrogate: 4-Bromofluorobenzene</i>	50.5		ug/L	50.2			101 80-116			
LCS (1JD1230-BS1)										
Prepared: 04/20/26 00:00 Analyzed: 04/20/26 10:14										
Chloromethane	30.22	1.0	ug/L	30.3			99.7 63-155			
Vinyl Chloride	29.78	1.0	ug/L	30.2			98.4 70-154			
Bromomethane	27.62	1.0	ug/L	30.1			91.7 52-176			
Chloroethane	31.58	1.0	ug/L	30.3			104 72-148			
Trichlorofluoromethane	30.57	1.0	ug/L	30.3			101 70-152			
1,1-Dichloroethylene	51.18	1.0	ug/L	50.1			102 70-148			
Acetone	103.2	10.0	ug/L	100			103 43-172			
Methyl Iodide	108.0	1.0	ug/L	100			108 69-170			
Carbon Disulfide	101.7	1.0	ug/L	100			102 72-162			
Methylene Chloride	50.66	5.0	ug/L	50.1			101 68-142			
Acrylonitrile	48.21	5.0	ug/L	50.4			95.7 33-163			
trans-1,2-Dichloroethylene	51.86	1.0	ug/L	50.1			104 66-148			

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Microbac Laboratories, Inc., Newton

CERTIFICATE OF ANALYSIS

1JD1942

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										
LCS (1JD1230-BS1)										
Prepared: 04/20/26 00:00 Analyzed: 04/20/26 10:14										
1,1-Dichloroethane	51.53	1.0	ug/L	50.1		103	66-143			
Vinyl Acetate	127.8	5.0	ug/L	131		97.4	43-153			
cis-1,2-Dichloroethylene	49.64	1.0	ug/L	50.4		98.6	71-149			
2-Butanone (MEK)	90.43	10.0	ug/L	100		90.4	52-159			
Bromochloromethane	51.23	1.0	ug/L	50.4		102	69-143			
Chloroform	50.58	1.0	ug/L	50.1		101	69-144			
1,1,1-Trichloroethane	52.13	1.0	ug/L	50.1		104	62-129			
Carbon Tetrachloride	50.70	1.0	ug/L	50.1		101	63-141			
Benzene	49.92	1.0	ug/L	50.4		99.0	71-134			
1,2-Dichloroethane	50.19	1.0	ug/L	50.1		100	72-132			
Trichloroethylene	50.41	1.0	ug/L	50.1		101	71-135			
1,2-Dichloropropane	50.80	1.0	ug/L	50.1		101	69-136			
Dibromomethane	48.97	1.0	ug/L	50.4		97.2	73-147			
Bromodichloromethane	50.84	1.0	ug/L	50.1		102	68-129			
cis-1,3-Dichloropropene	51.36	1.0	ug/L	50.1		103	65-134			
4-Methyl-2-pentanone (MIBK)	91.03	5.0	ug/L	100		91.0	58-147			
Toluene	48.57	1.0	ug/L	50.5		96.2	72-133			
trans-1,3-Dichloropropene	50.73	1.0	ug/L	50.1		101	67-130			
1,1,2-Trichloroethane	49.44	1.0	ug/L	50.1		98.7	69-135			
Tetrachloroethylene	47.24	1.0	ug/L	50.1		94.3	69-130			
2-Hexanone (MBK)	95.66	5.0	ug/L	100		95.7	55-144			
Dibromochloromethane	50.28	1.0	ug/L	50.1		100	73-127			
1,2-Dibromoethane	49.66	1.0	ug/L	50.2		98.9	67-132			
Chlorobenzene	49.42	1.0	ug/L	50.1		98.7	72-123			
1,1,1,2-Tetrachloroethane	47.28	1.0	ug/L	50.3		93.9	73-127			
Ethylbenzene	50.40	1.0	ug/L	50.2		100	71-127			
Xylenes, total	152.2	2.0	ug/L	151		101	74-127			
Styrene	50.73	1.0	ug/L	50.4		101	66-126			
Bromoform	47.62	1.0	ug/L	50.1		95.0	68-130			
1,2,3-Trichloropropane	49.00	1.0	ug/L	50.3		97.3	63-136			
trans-1,4-Dichloro-2-butene	105.4	5.0	ug/L	100		105	54-134			
1,1,2,2-Tetrachloroethane	47.87	1.0	ug/L	50.1		95.5	61-131			
1,4-Dichlorobenzene	47.70	1.0	ug/L	50.1		95.2	70-129			
1,2-Dichlorobenzene	49.69	1.0	ug/L	50.1		99.2	69-126			
1,2-Dibromo-3-chloropropane	47.94	5.0	ug/L	50.1		95.6	50-143			
Surrogate: Dibromofluoromethane	50.9		ug/L	50.2		101	57-128			
Surrogate: Dibromofluoromethane	50.9		ug/L	50.2		101	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.6		ug/L	50.4		102	49-135			
Surrogate: 1,2-Dichloroethane-d4	51.6		ug/L	50.4		102	61-142			
Surrogate: Toluene-d8	49.6		ug/L	50.5		98.2	82-116			
Surrogate: Toluene-d8	49.6		ug/L	50.5		98.2	82-121			
Surrogate: 4-Bromofluorobenzene	50.7		ug/L	50.2		101	77-114			
Surrogate: 4-Bromofluorobenzene	50.7		ug/L	50.2		101	80-116			

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CERTIFICATE OF ANALYSIS

1JD1942

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										
LCS Dup (1JD1230-BSD1)										
Prepared: 04/20/26 00:00 Analyzed: 04/20/26 10:39										
Chloromethane	31.96	1.0	ug/L	30.3		105	63-155	5.60	24	
Vinyl Chloride	31.87	1.0	ug/L	30.2		105	70-154	6.78	25	
Bromomethane	29.17	1.0	ug/L	30.1		96.8	52-176	5.46	27	
Chloroethane	33.76	1.0	ug/L	30.3		111	72-148	6.67	25	
Trichlorofluoromethane	31.77	1.0	ug/L	30.3		105	70-152	3.85	26	
1,1-Dichloroethylene	53.61	1.0	ug/L	50.1		107	70-148	4.64	24	
Acetone	106.2	10.0	ug/L	100		106	43-172	2.88	30	
Methyl Iodide	112.3	1.0	ug/L	100		112	69-170	3.93	30	
Carbon Disulfide	106.0	1.0	ug/L	100		106	72-162	4.19	24	
Methylene Chloride	52.12	5.0	ug/L	50.1		104	68-142	2.84	21	
Acrylonitrile	49.74	5.0	ug/L	50.4		98.8	33-163	3.12	28	
trans-1,2-Dichloroethylene	54.12	1.0	ug/L	50.1		108	66-148	4.26	27	
1,1-Dichloroethane	53.19	1.0	ug/L	50.1		106	66-143	3.17	24	
Vinyl Acetate	134.1	5.0	ug/L	131		102	43-153	4.81	30	
cis-1,2-Dichloroethylene	51.54	1.0	ug/L	50.4		102	71-149	3.76	26	
2-Butanone (MEK)	96.03	10.0	ug/L	100		96.0	52-159	6.01	27	
Bromochloromethane	53.25	1.0	ug/L	50.4		106	69-143	3.87	23	
Chloroform	52.84	1.0	ug/L	50.1		106	69-144	4.37	23	
1,1,1-Trichloroethane	53.90	1.0	ug/L	50.1		108	62-129	3.34	24	
Carbon Tetrachloride	52.06	1.0	ug/L	50.1		104	63-141	2.65	25	
Benzene	52.47	1.0	ug/L	50.4		104	71-134	4.98	24	
1,2-Dichloroethane	51.43	1.0	ug/L	50.1		103	72-132	2.44	24	
Trichloroethylene	52.98	1.0	ug/L	50.1		106	71-135	4.97	24	
1,2-Dichloropropane	53.59	1.0	ug/L	50.1		107	69-136	5.35	24	
Dibromomethane	51.14	1.0	ug/L	50.4		102	73-147	4.34	25	
Bromodichloromethane	53.29	1.0	ug/L	50.1		106	68-129	4.71	22	
cis-1,3-Dichloropropene	52.92	1.0	ug/L	50.1		106	65-134	2.99	23	
4-Methyl-2-pentanone (MIBK)	94.66	5.0	ug/L	100		94.7	58-147	3.91	27	
Toluene	51.18	1.0	ug/L	50.5		101	72-133	5.23	24	
trans-1,3-Dichloropropene	52.73	1.0	ug/L	50.1		105	67-130	3.87	24	
1,1,2-Trichloroethane	51.91	1.0	ug/L	50.1		104	69-135	4.87	23	
Tetrachloroethylene	49.06	1.0	ug/L	50.1		97.9	69-130	3.78	25	
2-Hexanone (MBK)	98.01	5.0	ug/L	100		98.0	55-144	2.43	25	
Dibromochloromethane	50.66	1.0	ug/L	50.1		101	73-127	0.753	22	
1,2-Dibromoethane	49.75	1.0	ug/L	50.2		99.1	67-132	0.181	24	
Chlorobenzene	50.97	1.0	ug/L	50.1		102	72-123	3.09	23	
1,1,1,2-Tetrachloroethane	49.37	1.0	ug/L	50.3		98.1	73-127	4.32	24	
Ethylbenzene	51.57	1.0	ug/L	50.2		103	71-127	2.29	26	
Xylenes, total	156.1	2.0	ug/L	151		103	74-127	2.56	25	
Styrene	51.89	1.0	ug/L	50.4		103	66-126	2.26	23	
Bromoform	48.04	1.0	ug/L	50.1		95.9	68-130	0.878	23	
1,2,3-Trichloropropane	49.47	1.0	ug/L	50.3		98.3	63-136	0.955	24	
trans-1,4-Dichloro-2-butene	104.5	5.0	ug/L	100		105	54-134	0.800	27	

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CERTIFICATE OF ANALYSIS

1JD1942

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										
LCS Dup (1JD1230-BSD1)										
				Prepared: 04/20/26 00:00 Analyzed: 04/20/26 10:39						
1,1,2,2-Tetrachloroethane	49.39	1.0	ug/L	50.1		98.6	61-131	3.13	29	
1,4-Dichlorobenzene	49.78	1.0	ug/L	50.1		99.3	70-129	4.27	24	
1,2-Dichlorobenzene	51.31	1.0	ug/L	50.1		102	69-126	3.21	26	
1,2-Dibromo-3-chloropropane	49.77	5.0	ug/L	50.1		99.3	50-143	3.75	30	
Surrogate: Dibromofluoromethane	49.8		ug/L	50.2		99.3	57-128			
Surrogate: Dibromofluoromethane	49.8		ug/L	50.2		99.3	75-136			
Surrogate: 1,2-Dichloroethane-d4	51.9		ug/L	50.4		103	49-135			
Surrogate: 1,2-Dichloroethane-d4	51.9		ug/L	50.4		103	61-142			
Surrogate: Toluene-d8	49.9		ug/L	50.5		98.9	82-116			
Surrogate: Toluene-d8	49.9		ug/L	50.5		98.9	82-121			
Surrogate: 4-Bromofluorobenzene	50.7		ug/L	50.2		101	77-114			
Surrogate: 4-Bromofluorobenzene	50.7		ug/L	50.2		101	80-116			
Matrix Spike (1JD1230-MS1)										
			Source: 1JD1939-01		Prepared: 04/20/26 00:00 Analyzed: 04/20/26 22:22					
Chloromethane	341.5	10.0	ug/L	303	ND	113	61-152			
Vinyl Chloride	341.3	10.0	ug/L	302	ND	113	66-149			
Bromomethane	279.3	10.0	ug/L	301	ND	92.7	43-171			
Chloroethane	348.9	10.0	ug/L	303	ND	115	69-148			
Trichlorofluoromethane	337.5	10.0	ug/L	303	ND	111	62-163			
1,1-Dichloroethylene	575.8	10.0	ug/L	501	ND	115	70-148			
Acetone	1101	100	ug/L	1000	ND	110	45-173			
Methyl Iodide	1110	10.0	ug/L	1000	ND	111	62-167			
Carbon Disulfide	1102	10.0	ug/L	1000	ND	110	71-163			
Methylene Chloride	561.2	50.0	ug/L	501	ND	112	69-140			
Acrylonitrile	545.3	50.0	ug/L	504	ND	108	32-159			
trans-1,2-Dichloroethylene	581.1	10.0	ug/L	501	ND	116	69-144			
1,1-Dichloroethane	568.2	10.0	ug/L	501	ND	113	70-138			
Vinyl Acetate	1363	50.0	ug/L	1310	ND	104	58-142			
cis-1,2-Dichloroethylene	546.9	10.0	ug/L	504	ND	109	68-151			
2-Butanone (MEK)	1023	100	ug/L	1000	ND	102	50-160			
Bromochloromethane	578.5	10.0	ug/L	504	ND	115	65-143			
Chloroform	564.7	10.0	ug/L	501	ND	113	71-143			
1,1,1-Trichloroethane	574.4	10.0	ug/L	501	ND	115	63-133			
Carbon Tetrachloride	556.1	10.0	ug/L	501	ND	111	63-142			
Benzene	529.4	10.0	ug/L	504	ND	105	69-133			
1,2-Dichloroethane	543.0	10.0	ug/L	501	ND	108	63-138			
Trichloroethylene	526.5	10.0	ug/L	501	ND	105	71-133			
1,2-Dichloropropane	539.4	10.0	ug/L	501	ND	108	69-132			
Dibromomethane	512.9	10.0	ug/L	504	ND	102	70-147			
Bromodichloromethane	534.9	10.0	ug/L	501	ND	107	67-130			
cis-1,3-Dichloropropene	530.0	10.0	ug/L	501	ND	106	61-126			
4-Methyl-2-pentanone (MIBK)	1029	50.0	ug/L	1000	ND	103	55-147			
Toluene	519.3	10.0	ug/L	505	ND	103	71-133			
trans-1,3-Dichloropropene	525.3	10.0	ug/L	501	ND	105	63-124			

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CERTIFICATE OF ANALYSIS

1JD1942

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										
Matrix Spike (1JD1230-MS1)										
			Source: 1JD1939-01		Prepared: 04/20/26 00:00 Analyzed: 04/20/26 22:22					
1,1,2-Trichloroethane	520.1	10.0	ug/L	501	ND	104	69-133			
Tetrachloroethylene	484.2	10.0	ug/L	501	ND	96.7	70-124			
2-Hexanone (MBK)	1076	50.0	ug/L	1000	ND	108	53-141			
Dibromochloromethane	511.3	10.0	ug/L	501	ND	102	74-122			
1,2-Dibromoethane	515.7	10.0	ug/L	502	ND	103	66-127			
Chlorobenzene	520.1	10.0	ug/L	501	ND	104	76-116			
1,1,1,2-Tetrachloroethane	488.2	10.0	ug/L	503	ND	97.0	77-121			
Ethylbenzene	524.1	10.0	ug/L	502	ND	104	73-124			
Xylenes, total	1584	20.0	ug/L	1510	ND	105	75-123			
Styrene	522.9	10.0	ug/L	504	ND	104	70-120			
Bromoform	482.9	10.0	ug/L	501	ND	96.4	70-124			
1,2,3-Trichloropropane	513.7	10.0	ug/L	503	ND	102	62-135			
trans-1,4-Dichloro-2-butene	1058	50.0	ug/L	1000	ND	106	50-120			
1,1,2,2-Tetrachloroethane	507.5	10.0	ug/L	501	ND	101	63-126			
1,4-Dichlorobenzene	485.4	10.0	ug/L	501	ND	96.8	72-119			
1,2-Dichlorobenzene	505.5	10.0	ug/L	501	ND	101	71-117			
1,2-Dibromo-3-chloropropane	523.9	50.0	ug/L	501	ND	105	49-134			
Surrogate: Dibromofluoromethane	531		ug/L	502		106	57-128			
Surrogate: Dibromofluoromethane	531		ug/L	502		106	75-136			
Surrogate: 1,2-Dichloroethane-d4	559		ug/L	504		111	49-135			
Surrogate: 1,2-Dichloroethane-d4	559		ug/L	504		111	61-142			
Surrogate: Toluene-d8	511		ug/L	505		101	82-116			
Surrogate: Toluene-d8	511		ug/L	505		101	82-121			
Surrogate: 4-Bromofluorobenzene	511		ug/L	502		102	77-114			
Surrogate: 4-Bromofluorobenzene	511		ug/L	502		102	80-116			
Matrix Spike Dup (1JD1230-MSD1)										
			Source: 1JD1939-01		Prepared: 04/20/26 00:00 Analyzed: 04/20/26 22:47					
Chloromethane	312.1	10.0	ug/L	303	ND	103	61-152	9.00	26	
Vinyl Chloride	310.2	10.0	ug/L	302	ND	103	66-149	9.55	23	
Bromomethane	269.0	10.0	ug/L	301	ND	89.3	43-171	3.76	29	
Chloroethane	328.0	10.0	ug/L	303	ND	108	69-148	6.18	25	
Trichlorofluoromethane	313.5	10.0	ug/L	303	ND	103	62-163	7.37	25	
1,1-Dichloroethylene	528.5	10.0	ug/L	501	ND	105	70-148	8.57	22	
Acetone	1098	100	ug/L	1000	ND	110	45-173	0.318	30	
Methyl Iodide	1038	10.0	ug/L	1000	ND	104	62-167	6.73	24	
Carbon Disulfide	1018	10.0	ug/L	1000	ND	102	71-163	7.96	22	
Methylene Chloride	530.9	50.0	ug/L	501	ND	106	69-140	5.55	19	
Acrylonitrile	550.0	50.0	ug/L	504	ND	109	32-159	0.858	30	
trans-1,2-Dichloroethylene	538.6	10.0	ug/L	501	ND	108	69-144	7.59	22	
1,1-Dichloroethane	530.8	10.0	ug/L	501	ND	106	70-138	6.81	20	
Vinyl Acetate	1351	50.0	ug/L	1310	ND	103	58-142	0.929	24	
cis-1,2-Dichloroethylene	507.0	10.0	ug/L	504	ND	101	68-151	7.57	22	
2-Butanone (MEK)	1069	100	ug/L	1000	ND	107	50-160	4.40	23	
Bromochloromethane	545.0	10.0	ug/L	504	ND	108	65-143	5.96	22	

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CERTIFICATE OF ANALYSIS

1JD1942

Determination of Volatile Organic Compounds	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1230 - EPA 5030B - EPA 8260D										
Matrix Spike Dup (1JD1230-MSD1)	Source: 1JD1939-01			Prepared: 04/20/26 00:00 Analyzed: 04/20/26 22:47						
Chloroform	529.1	10.0	ug/L	501	ND	106	71-143	6.51	21	
1,1,1-Trichloroethane	534.6	10.0	ug/L	501	ND	107	63-133	7.18	23	
Carbon Tetrachloride	516.0	10.0	ug/L	501	ND	103	63-142	7.48	22	
Benzene	504.5	10.0	ug/L	504	ND	100	69-133	4.82	18	
1,2-Dichloroethane	520.3	10.0	ug/L	501	ND	104	63-138	4.27	20	
Trichloroethylene	507.8	10.0	ug/L	501	ND	101	71-133	3.62	23	
1,2-Dichloropropane	515.2	10.0	ug/L	501	ND	103	69-132	4.59	20	
Dibromomethane	492.3	10.0	ug/L	504	ND	97.7	70-147	4.10	22	
Bromodichloromethane	520.6	10.0	ug/L	501	ND	104	67-130	2.71	21	
cis-1,3-Dichloropropene	515.2	10.0	ug/L	501	ND	103	61-126	2.83	21	
4-Methyl-2-pentanone (MIBK)	1031	50.0	ug/L	1000	ND	103	55-147	0.233	23	
Toluene	495.8	10.0	ug/L	505	ND	98.2	71-133	4.63	19	
trans-1,3-Dichloropropene	502.2	10.0	ug/L	501	ND	100	63-124	4.50	21	
1,1,2-Trichloroethane	515.9	10.0	ug/L	501	ND	103	69-133	0.811	19	
Tetrachloroethylene	446.7	10.0	ug/L	501	ND	89.2	70-124	8.06	24	
2-Hexanone (MBK)	1063	50.0	ug/L	1000	ND	106	53-141	1.24	24	
Dibromochloromethane	500.7	10.0	ug/L	501	ND	100	74-122	2.09	21	
1,2-Dibromoethane	493.7	10.0	ug/L	502	ND	98.3	66-127	4.36	23	
Chlorobenzene	481.8	10.0	ug/L	501	ND	96.2	76-116	7.65	21	
1,1,1,2-Tetrachloroethane	464.8	10.0	ug/L	503	ND	92.3	77-121	4.91	25	
Ethylbenzene	485.4	10.0	ug/L	502	ND	96.8	73-124	7.67	20	
Xylenes, total	1477	20.0	ug/L	1510	ND	97.8	75-123	6.98	20	
Styrene	496.6	10.0	ug/L	504	ND	98.6	70-120	5.16	23	
Bromoform	476.3	10.0	ug/L	501	ND	95.0	70-124	1.38	22	
1,2,3-Trichloropropane	493.7	10.0	ug/L	503	ND	98.1	62-135	3.97	28	
trans-1,4-Dichloro-2-butene	1050	50.0	ug/L	1000	ND	105	50-120	0.693	26	
1,1,2,2-Tetrachloroethane	499.9	10.0	ug/L	501	ND	99.8	63-126	1.51	24	
1,4-Dichlorobenzene	477.8	10.0	ug/L	501	ND	95.3	72-119	1.58	24	
1,2-Dichlorobenzene	491.0	10.0	ug/L	501	ND	98.0	71-117	2.91	24	
1,2-Dibromo-3-chloropropane	562.6	50.0	ug/L	501	ND	112	49-134	7.12	28	
Surrogate: Dibromofluoromethane	521		ug/L	502		104	57-128			
Surrogate: Dibromofluoromethane	521		ug/L	502		104	75-136			
Surrogate: 1,2-Dichloroethane-d4	546		ug/L	504		108	49-135			
Surrogate: 1,2-Dichloroethane-d4	546		ug/L	504		108	61-142			
Surrogate: Toluene-d8	509		ug/L	505		101	82-116			
Surrogate: Toluene-d8	509		ug/L	505		101	82-121			
Surrogate: 4-Bromofluorobenzene	497		ug/L	502		99.0	77-114			
Surrogate: 4-Bromofluorobenzene	497		ug/L	502		99.0	80-116			

Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1295 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1JD1295-BLK1)	Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:09									



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CERTIFICATE OF ANALYSIS

1JD1942

Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1295 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Blank (1JD1295-BLK1)			Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:09							
Antimony	<0.00100	0.00100	mg/L							
Arsenic	<0.00200	0.00200	mg/L							
Barium	<0.00100	0.00100	mg/L							
Beryllium	<0.000500	0.000500	mg/L							
Cadmium	<0.000200	0.000200	mg/L							
Chromium	<0.00100	0.00100	mg/L							B
Cobalt	<0.000500	0.000500	mg/L							
Copper	<0.00500	0.00500	mg/L							
Lead	<0.00100	0.00100	mg/L							
Nickel	<0.00500	0.00500	mg/L							
Selenium	<0.00200	0.00200	mg/L							
Silver	<0.00500	0.00500	mg/L							
Thallium	<0.000500	0.000500	mg/L							
Vanadium	<0.00200	0.00200	mg/L							
Zinc	<0.00500	0.00500	mg/L							
LCS (1JD1295-BS1)			Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:11							
Antimony	0.0933	0.00400	mg/L	0.100		93.3	80-120			
Arsenic	0.0868	0.00800	mg/L	0.100		86.8	80-120			
Barium	0.0955	0.00400	mg/L	0.100		95.5	80-120			
Beryllium	0.0896	0.00200	mg/L	0.100		89.6	80-120			
Cadmium	0.0910	0.000800	mg/L	0.100		91.0	80-120			
Chromium	0.0898	0.00400	mg/L	0.100		89.8	80-120			
Cobalt	0.0888	0.00200	mg/L	0.100		88.8	80-120			
Copper	0.0870	0.0200	mg/L	0.100		87.0	80-120			
Lead	0.0952	0.00400	mg/L	0.100		95.2	80-120			
Nickel	0.0925	0.0200	mg/L	0.100		92.5	80-120			
Selenium	0.0940	0.00800	mg/L	0.100		94.0	80-120			
Silver	0.0923	0.0200	mg/L	0.100		92.3	80-120			
Thallium	0.0967	0.00200	mg/L	0.100		96.7	80-120			
Vanadium	0.0894	0.00800	mg/L	0.100		89.4	80-120			
Zinc	0.0917	0.0200	mg/L	0.100		91.7	80-120			
Matrix Spike (1JD1295-MS1)			Source: 1JD1942-01		Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:24					
Antimony	0.103	0.00400	mg/L	0.100	ND	103	75-125			
Arsenic	0.175	0.00800	mg/L	0.100	0.0783	96.8	75-125			
Barium	0.654	0.00400	mg/L	0.100	0.588	66.4	75-125			M6
Beryllium	0.0961	0.00200	mg/L	0.100	ND	96.1	75-125			
Cadmium	0.100	0.000800	mg/L	0.100	ND	100	75-125			
Chromium	0.0965	0.00400	mg/L	0.100	ND	96.5	75-125			
Cobalt	0.0983	0.00200	mg/L	0.100	0.00404	94.3	75-125			
Copper	0.0903	0.0200	mg/L	0.100	ND	90.3	75-125			
Lead	0.105	0.00400	mg/L	0.100	ND	105	75-125			
Nickel	0.116	0.0200	mg/L	0.100	0.0178	98.2	75-125			
Selenium	0.103	0.00800	mg/L	0.100	ND	103	75-125			

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1JD1942

Metals Total by ICPMS	Result	RL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1JD1295 - EPA 3005A Total Recoverable Metals - EPA 6020A										
Matrix Spike (1JD1295-MS1) Source: 1JD1942-01 Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:24										
Silver	0.102	0.0200	mg/L	0.100	ND	102	75-125			
Thallium	0.109	0.00200	mg/L	0.100	ND	109	75-125			
Vanadium	0.0970	0.00800	mg/L	0.100	ND	97.0	75-125			
Zinc	0.0990	0.0200	mg/L	0.100	ND	99.0	75-125			
Matrix Spike Dup (1JD1295-MSD1) Source: 1JD1942-01 Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:27										
Antimony	0.0961	0.00400	mg/L	0.100	ND	96.1	75-125	6.49	20	
Arsenic	0.160	0.00800	mg/L	0.100	0.0783	81.6	75-125	9.06	20	
Barium	0.583	0.00400	mg/L	0.100	0.588	NR	75-125	11.5	20	M6
Beryllium	0.0896	0.00200	mg/L	0.100	ND	89.6	75-125	7.04	20	
Cadmium	0.0908	0.000800	mg/L	0.100	ND	90.8	75-125	9.81	20	
Chromium	0.0915	0.00400	mg/L	0.100	ND	91.5	75-125	5.24	20	
Cobalt	0.0917	0.00200	mg/L	0.100	0.00404	87.6	75-125	6.99	20	
Copper	0.0847	0.0200	mg/L	0.100	ND	84.7	75-125	6.38	20	
Lead	0.0982	0.00400	mg/L	0.100	ND	98.2	75-125	6.58	20	
Nickel	0.109	0.0200	mg/L	0.100	0.0178	91.0	75-125	6.39	20	
Selenium	0.0938	0.00800	mg/L	0.100	ND	93.8	75-125	9.04	20	
Silver	0.0956	0.0200	mg/L	0.100	ND	95.6	75-125	6.83	20	
Thallium	0.0990	0.00200	mg/L	0.100	ND	99.0	75-125	9.91	20	
Vanadium	0.0915	0.00800	mg/L	0.100	ND	91.5	75-125	5.79	20	
Zinc	0.0915	0.0200	mg/L	0.100	ND	91.5	75-125	7.82	20	
Post Spike (1JD1295-PS1) Source: 1JD1942-01 Prepared: 04/21/26 15:01 Analyzed: 04/22/26 22:29										
Antimony	0.0223		mg/L	0.0200	0.000182	110	80-120			
Arsenic	0.0984		mg/L	0.0200	0.0783	100	80-120			
Barium	0.604		mg/L	0.0200	0.588	79.1	80-120			M6
Beryllium	0.0195		mg/L	0.0200	0.000210	97.6	80-120			
Cadmium	0.0227		mg/L	0.0200	0.000110	113	80-120			
Chromium	0.0204		mg/L	0.0200	0.000819	98.0	80-120			
Cobalt	0.0240		mg/L	0.0200	0.00404	99.8	80-120			
Copper	0.0191		mg/L	0.0200	0.000817	91.5	80-120			
Lead	0.0233		mg/L	0.0200	0.000680	116	80-120			
Nickel	0.0377		mg/L	0.0200	0.0178	99.6	80-120			
Selenium	0.0203		mg/L	0.0200	0.000356	99.6	80-120			
Silver	0.0220		mg/L	0.0200	0.000740	110	80-120			
Thallium	0.0246		mg/L	0.0200	0.000050	123	80-120			M1
Vanadium	0.0207		mg/L	0.0200	0.000276	102	80-120			
Zinc	0.0225		mg/L	0.0200	0.00261	99.7	80-120			



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CERTIFICATE OF ANALYSIS

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Definitions

- B:** The target analyte was detected in the blank at or above the method acceptance criteria.
- M1:** Matrix spike recovery is above acceptance limits.
- M6:** Matrix spike recovery is outside of acceptance limits. The analyte concentration is greater than 4X the spiking level.
- RL:** Reporting Limit
- RPD:** Relative Percent Difference

Cooler Receipt Log

Cooler ID: Default Cooler Temp: 1.2°C

Cooler Inspection Checklist

Custody Seals	No	Containers Intact	Yes
COC/Labels Agree	Yes	Preservation Confirmed	No
Received On Ice	Yes		

Report Comments

The data and information on this, and other accompanying documents, represents only the sample(s) analyzed. This report is incomplete unless all pages indicated in the footnote are present and an authorized signature is included. The services were provided under and subject to Microbac's standard terms and conditions which can be located and reviewed at <<https://www.microbac.com/standard-terms-conditions>>.

Reviewed and Approved By:

Heather Murphy
Customer Relationship Specialist
heather.murphy@microbac.com
04/28/26 14:58

CHAIN OF CUSTODY

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Centerville, IA 52544
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PAGE 1 OF 1

PRINT OR TYPE INFORMATION BELOW SAMPLER: <u>JGH</u> SITE NAME: <u>Royal Iowa (RIWMA) Landfill</u> ADDRESS: _____ CITY/ST/ZIP: <u>Eldora, IA</u> PHONE: _____		REPORT TO: NAME: <u>TODD WHIPPLE</u> COMPANY NAME: <u>HLW Group LLC</u> ADDRESS: <u>204 West Broad St</u> CITY/ST/ZIP: <u>Story City IA 50248</u> PHONE: <u>515-733-4144</u> FAX: <u>4146</u>		BILL TO: NAME: <u>Clint Reents, Director</u> COMPANY NAME: <u>RIWMA</u> ADDRESS: <u>20488 M Ave</u> CITY/ST/ZIP: <u>Eldora, IA 50627</u> PHONE: _____ Keystone Quote No: _____ (If Applicable)	
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CLIENT SAMPLE NUMBER	DATE	TIME	SAMPLE LOCATION	NO. OF CONTAINERS	MATRIX	GRAB/COMPOSITE	ANALYSES REQUIRED										LAB USE ONLY				
							LABORATORY WORK ORDER NO.	SAMPLE TEMPERATURE UPON RECEIPT:	LABORATORY SAMPLE NUMBER												
ACM TILE 1	4-14-26	12:00A	ACM TILE 1	7	W	G	X												1JDI942	1.2 °C	01

Relinquished by: (Signature) <u>[Signature]</u>	Date	Received by: (Signature)	Date	Turn-Around:
	Time		Time	<input type="checkbox"/> Standard <input type="checkbox"/> Rush
Relinquished by: (Signature)	Date	Received for Lab by: (Signature) <u>[Signature]</u>	Date <u>4-17-26</u>	Remarks:
	Time		Time <u>1:00</u>	

Contact Lab Prior to Submission